

**Flood Control Project Maintenance  
Levee Inspections**

**Fall 2018 Levee Maintenance Deficiency Summary Report**

**Overall LMA & Unit Ratings, including USACE Erosion Survey**

**Sacramento River Basin**

**\*\* SBFCA currently has operation and maintenance obligations during project construction and closeout.**

MA0016		Overall LMA Rating	Total LMA Miles						
Sutter Maintenance Yard Maintenance Area 0016		A	4.06						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence		
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles	
Earthen Levee									
Encroachments						0.23			
Supplemental									
DWR UCIP Field Study						0.01			
DWR UCIP LMA Responsibility									
LMA Totals:		0.00	0.00	0.00	0.00%	0.24	0.00	0.00	0.00

Unit No. 01 Feather River RB		Overall Unit Rating	Total Unit Miles						
MA0016		A	4.06						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence		
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles	
Earthen Levee									
Encroachments						0.23			
Supplemental									
DWR UCIP Field Study						0.01			
DWR UCIP LMA Responsibility									
Unit Totals:		0.00	0.00	0.00	0.00%	0.24	0.00	0.00	0.00

**Flood Control Project Maintenance  
Levee Inspections****LMA District Cover Sheet****Fall 2018 Levee Inspection Results****Sutter Maintenance Yard Maintenance Area 0016**

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
† Overall LMA Rating (Fall Only)			A	

\*\* Non-receipt of Summer or Winter Inspection  
Reports may effect overall annual rating.

† **SPRING INSPECTIONS:** Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

**FALL INSPECTIONS:** The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indication of risk.

Comments


**Flood Control Project Maintenance  
Levee Inspections**

**Unit Cover Sheet**

**Fall 2018 Levee Inspection Results**

**Sutter Maintenance Yard Maintenance Area 0016**

Waterway			Bank	Unit Miles
Unit No. 01 Feather River			Right	4.06
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			<b>A</b>	
Date of Inspection	3/20/2018 - 3/20/2018		9/6/2018 - 9/6/2018	
DWR Inspector	Sterling York		Sterling York	
Accompanied By	Shawn Freitag Sutter Maintenance Yard		Shawn Freitag Sutter Maintenance Yard	

**Summer & Winter Inspections**

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

*The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.*

**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2018**

**Sutter Maintenance Yard Maintenance Area 0016**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	09/06/2018 09/06/2018	Sterling York

LM Start		Rating **	A	Issue No.	3
LM End		Issue Type +	Ma	Location *	
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Operations & Maintenance Manuals			°	°
DWR ID	DWR_MA0016_01_s_2013_3				
Comment Code					
Inspector Comment					
SBFCA has turned over levee to MA 16. The O&M manuals are located at the Sutter Maintenance Yard.					

No Photos

LM Start		Rating **	A	Issue No.	4
LM End		Issue Type +	Ma	Location *	
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Flood Preparedness & Training			°	°
DWR ID	DWR_MA0016_01_s_2013_4				
Comment Code					
Inspector Comment					
Sutter maintenance yard employees attend the annual Flood Fight class put on by DWR.					

No Photos

LM Start		Rating **	A	Issue No.	5
LM End		Issue Type +	Ma	Location *	
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Emergency Supplies & Equipment			°	°
DWR ID	DWR_MA0016_01_s_2013_5				
Comment Code					
Inspector Comment					
Emergency supplies and equipment are stored at the Sutter Maintenance Yard.					

No Photos

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2018**

**Sutter Maintenance Yard Maintenance Area 0016**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	09/06/2018 09/06/2018	Sterling York

LM Start	0.00	Rating **	A	Issue No.	6
LM End	4.07	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.255795 °	39.311097 °
				-121.636396 °	-121.637631 °
DWR ID	DWR_MA0016_01_f_2018_6				
Comment Code					
V1 : Control annual grass and weeds on the levee slopes and easements.					
Inspector Comment					
The annual vegetation is well maintained, Fall 2018.					

Photo 1 of 1 : FA\_2018\_MA0016\_302\_6\_20181002\_00009.jpg



View looking upstream landside at the well maintained annual vegetation, Fall 2018.

LM Start	0.00	Rating **	A	Issue No.	7
LM End	4.07	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.255795 °	39.311097 °
				-121.636396 °	-121.637631 °
DWR ID	DWR_MA0016_01_f_2018_7				
Comment Code					
V1 : Control annual grass and weeds on the levee slopes and easements.					
Inspector Comment					
The annual vegetation is well maintained, Fall 2018.					

Photo 1 of 1 : FA\_2018\_MA0016\_302\_7\_20181002\_00008.jpg



View looking upstream waterside at the well maintained annual vegetation, Fall 2018.

LM Start	2.85	Rating **	M	Issue No.	14
LM End	3.08	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.293675 °	39.296748 °
				-121.636615 °	-121.638192 °
DWR ID	DWR_MA0016_01_s_2012_14				
Comment Code					
DT : Ditch					
Inspector Comment					
Agricultural ditch land side slope and toe.					

Photo 1 of 2 : FA\_2018\_MA0016\_302\_14\_20180906\_00002.jpg



Agricultural ditch land side slope and toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2018**

**Sutter Maintenance Yard Maintenance Area 0016**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	09/06/2018 09/06/2018	Sterling York

LM Start	2.85	Rating **	M	Issue No.	14 (cont)	
LM End	3.08	Issue Type +	En	Location *	LS	
Category	Earthen Levee			GPS Latitude/Longitude		
				Start	End	
Item	Encroachments			39.293675 °	39.296748 °	
				-121.636615 °	-121.638192 °	
DWR ID	DWR_MA0016_01_s_2012_14					
Comment Code						
DT : Ditch						
Inspector Comment						
Agricultural ditch land side slope and toe.						

Photo 2 of 2 : FA\_2018\_MA0016\_302\_14\_20180906\_00003.jpg



Agricultural ditch land side slope and toe.

LM Start	3.39	Rating **	M	Issue No.	15	
LM End	3.39	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			39.301218 °	39.301218 °	
				-121.638332 °	-121.638332 °	
DWR ID	17125					
Comment Code						
Inspector Comment						
FS_ID:51931 DS_ID:17125 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: 5/22/2017 LS inlet buried. WS access being blocked off by over grown vegetation. Pipe has been selected for internal cleaning and inspection as part of the DMP project. (DWR Sutter Yard - AFreitag)12/1/2016 LS inlet completely buried. (DWR Sutter Yard - AFreitag)5/26/2016 LS inlet was completely buried.6/8/2015 Concrete headwall is still cracked and inlet is buried. It was said to be replaced with the SBFCA project but the project skipped over in this area.12/29/2014 Same as last inspection.5/19/2014 Same as last inspection.11/6/2013 Same as last inspection.5/14/2013 SBFCA project recommends replacing in accordance with title 23. Same as last inspection.12/11/2012 Concrete headwall on LS toe is cracked through middle and pipe is burried in soil. pipe appears corroded. (DWR UCIP - W. Wylie) FIELD_STRUCT_DESC: 1 of 2: 24-inch corrugated metal drainage pipe through the levee, 16.6 feet below the crown. Concrete headwalls on both the waterside (WS) and the landside (LS) ends. Flap gate on the WS end. [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 148, August 1955, (Station 646+96)]. FS Date: 5/31/2017 7:29:38 AM						

Photo 1 of 2 : UCIP\_FA\_2018\_51931\_65782.jpg



Headwall at LS toe is cracked and the inlet is buried in soil.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2018**

**Sutter Maintenance Yard Maintenance Area 0016**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	09/06/2018 09/06/2018	Sterling York

LM Start	3.39	Rating **	M	Issue No.	15 (cont)	
LM End	3.39	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			39.301218 °	39.301218 °	
				-121.638332 °	-121.638332 °	
DWR ID	17125					
Comment Code						
Inspector Comment						
FS_ID:51931 DS_ID:17125 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: 5/22/2017 LS inlet buried. WS access being blocked off by over grown vegetation. Pipe has been selected for internal cleaning and inspection as part of the DMP project. (DWR Sutter Yard - A Freitag)12/1/2016 LS inlet completely buried. (DWR Sutter Yard - A Freitag)5/26/2016 LS inlet was completely buried.6/8/2015 Concrete headwall is still cracked and inlet is buried. It was said to be replaced with the SBFCA project but the project skipped over in this area.12/29/2014 Same as last inspection.5/19/2014 Same as last inspection.11/6/2013 Same as last inspection.5/14/2013 SBFCA project recommends replacing in accordance with title 23. Same as last inspection.12/11/2012 Concrete headwall on LS toe is cracked through middle and pipe is burried in soil. pipe appears corroded. (DWR UCIP - W. Wylie) FIELD_STRUCT_DESC: 1 of 2: 24-inch corrugated metal drainage pipe through the levee, 16.6 feet below the crown. Concrete headwalls on both the waterside (WS) and the landside (LS) ends. Flap gate on the WS end. [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 148, August 1955, (Station 646+96)]. FS Date: 5/31/2017 7:29:38 AM						

Photo 2 of 2 : UCIP\_FA\_2018\_51931\_65781.jpg



Headwall on WS toe with flap gates.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2018**

**Sutter Maintenance Yard Maintenance Area 0016**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	09/06/2018 09/06/2018	Sterling York

LM Start	3.39	Rating **	M	Issue No.	16
LM End	3.39	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			39.301218 °	39.301218 °
				-121.638332 °	-121.638332 °
DWR ID	17183				

**Comment Code**

**Inspector Comment**

FS\_ID:51932  
DS\_ID:17183  
EP\_NO: N/A  
Repair Type: Non-Urgent  
Crossing Status: Indicator Found  
UCIP Comments: 5/22/2017 LS inlet is buried. WS access is being blocked off by overgrown vegetation. (DWR Sutter Yard - A Freitag) 12/1/2016 LS inlet is completely buried. (DWR Sutter Yard - A Freitag) 5/26/2016 LS inlet was completely buried. 6/8/2015 Concrete headwall is still cracked and inlet is buried. It was said to be replaced with the SBFA project but the project skipped over in this area. 12/29/2014 Same as last inspection. 5/19/2014 Same as last inspection. 11/6/2013 Same as last inspection. 5/14/2013 SBFA project recommends replacing in accordance with title 23. Same as last inspection. 12/11/2012 Pipe buried on LS toe and should be inspected along with adjacent 24-inch once uncovered. (DWR UCIP - W. Wylie) FIELD\_STRUCT\_DESC: 2 of 2: 24-inch corrugated metal drainage pipe through the levee, 16.6 feet below the crown. Headwalls at both the waterside (WS) and landside (LS) ends and a flap gate on the WS toe. [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 148, August 1955 (Station 646+96)].  
FS Date: 5/31/2017 7:32:55 AM

LM Start	<b>3.39</b>	Rating **	M	Issue No.	<b>16 (cont)</b>
LM End	<b>3.39</b>	Issue Type +	En	Location *	

Photo 1 of 2 : UCIP\_FA\_2018\_51932\_65780.jpg



Pipe should be located on either side of the one visible in this picture.

Photo 2 of 2 : UCIP\_FA\_2018\_51932\_65779.jpg



Headwall and flap gate on WS toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	<b>N : Not Inspected/Rated</b> C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2018**

**Sutter Maintenance Yard Maintenance Area 0016**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	09/06/2018 09/06/2018	Sterling York

LM Start	3.94	Rating **	C	Issue No.	11
LM End	4.09	Issue Type +	Ma	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Crown Surface / Depressions / Rutting			39.309154 °	39.311298 °
				-121.637694 °	-121.637554 °
DWR ID	DWR_MA0016_01_s_2018_11				
Comment Code					
C1 : Add appropriate material and re-grade the levee to bring the crown above the design elevation.					
Inspector Comment					
Re-grading and aggregate base was done in summer, 2018.					

No Photos

LM Start	4.07	Rating **	A/W	Issue No.	17
LM End	4.07	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.311127 °	39.311127 °
				-121.637606 °	-121.637606 °
DWR ID	17123				
Comment Code					
Inspector Comment					
FS_ID:52886 DS_ID:17123 EP_NO: N/A Repair Type: No Action Needed Crossing Status: Found UCIP Comments: 5/22/2017 Crossing appears to be in good condition. (DWR Sutter Yard - A/Freitag)12/1/2016 Crossing appears to be in good condition. (DWR Sutter Yard- A/Freitag)5/26/2016 Crossing appears to be in good condition.6/8/2015 Pipe appears to be in good condition. No noticeable issues to report. Pipe was listed to be replaced with the SBFCA project but the project did not take place in this area.12/29/2014 Same as last inspection.5/19/2014 Same as last inspection.11/6/2013 Same as last inspection.5/14/2013 Slide gate opened allowing water to flow through, debris problem has been cleared and the gates seem to be functioning properly. SBFCA project recommends replacing in accordance with title 23.12/11/2012 Lock missing from concrete well access door-this should be resplaced. Some debris blocking preventing flapgate from completely closing. (DWR UCIP - W. Wylie) FIELD_STRUCT_DESC: 48-inch by 72-inch reinforced concrete drainage culvert through the levee, 20.5 feet below the crown. Slide gate in a concrete well on the waterside (WS) slope. Siphon breaker/air vent on the WS shoulder at the concrete well. [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 148, August 1955, (Station 683+25)]. FS Date: 5/31/2017 7:36:00 AM					

Photo 1 of 3 : UCIP\_FA\_2018\_52886\_65785.jpg



Slide gate, concrete well, siphon breaker/air vent and open channel on WS of levee.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2018**

**Sutter Maintenance Yard Maintenance Area 0016**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	09/06/2018 09/06/2018	Sterling York

LM Start	4.07	Rating **	A/W	Issue No.	17 (cont)
LM End	4.07	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.311127°	39.311127°
				-121.637606°	-121.637606°
DWR ID	17123				
Comment Code					
Inspector Comment					
FS_ID:52886 DS_ID:17123 EP_NO: N/A Repair Type: No Action Needed Crossing Status: Found UCIP Comments: 5/22/2017 Crossing appears to be in good condition. (DWR Sutter Yard- A Freitag)12/1/2016 Crossing appears to be in good condition. (DWR Sutter Yard- A Freitag)5/26/2016 Crossing appears to be in good condition.6/8/2015 Pipe appears to be in good condition. No noticeable issues to report. Pipe was listed to be replaced with the SBFCA project but the project did not take place in this area.12/29/2014 Same as last inspection.5/19/2014 Same as last inspection.11/6/2013 Same as last inspection.5/14/2013 Slide gate opened allowing water to flow through, debris problem has been cleared and the gates seem to be functioning properly. SBFCA project recommends replacing in accordance with title 23.12/11/2012 Lock missing from concrete well access door-this should be resplaced. Some debris blocking preventing flapgate from completely closing. (DWR UCIP - W. Wylie) FIELD_STRUCT_DESC: 48-inch by 72-inch reinforced concrete drainage culvert through the levee, 20.5 feet below the crown. Slide gate in a concrete well on the waterside (WS) slope. Siphon breaker/air vent on the WS shoulder at the concrete well. [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 148, August 1955, (Station 683+25)]. FS Date: 5/31/2017 7:36:00 AM					

LM Start	<b>4.07</b>	Rating **	A/W	Issue No.	<b>17 (cont)</b>
LM End	<b>4.07</b>	Issue Type +	Ma	Location *	

Photo 2 of 3 : UCIP\_FA\_2018\_52886\_65784.jpg



Pumping plant and slide gate on LS accross canal. (no access from levee).

Photo 3 of 3 : UCIP\_FA\_2018\_52886\_65783.jpg



Concrete headwall and flap gate on WS toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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